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The Quarterly Cumulative Index Medicus

WHAT IT STANDS FOR AND HOW TO USE IT

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WASHINGTON, D. C.

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THE QUARTERLY CUMULATIVE INDEX MEDICUS

WHAT IT STANDS FOR AND HOW TO USE IT*

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During the year 1926, by arrangement between the American Medical Association and the Carnegie Institution of Washington, it was decided to fuse the *Index Medicus* (1879-1926) and the *Quarterly Cumulative Index* of the American Medical Association (1916-1926) to form the *Quarterly Cumulative Index Medicus*, financed jointly by the American Medical Association and the Carnegie Institution of Washington, compiled from material indexed and classified in the Libraries of the Surgeon General's Office (Washington) and the American Medical Association, and published by the American Medical Association. The new journal will be issued quarterly and cumulated semi-annually in two volumes. The first quarterly number (January-March) appeared in May, 1927. In acquainting our readers with the detailed merits of the new quarterly, it is fitting to give some account of its parentage.

PEDIGREE OF THE PARENT JOURNALS

The *Index Medicus* was started in January, 1879, by Drs. John S. Billings and Robert Fletcher as "a monthly classified record of the current medical literature of the world." This journal might be described as the grandchild of two ideas. Its parent, the *Index Catalogue* of the Surgeon General's Library, did not become known to the world as such until a year later (1880).

The germinal ideas were conceived in the brain of Billings when he was wrestling with his graduating dissertation on epilepsy at the Medical College of Ohio (Cincinnati, 1861), viz, "to establish for the use of American physicians a fairly

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completed medical library, and in connection with this to prepare a comprehensive catalogue and index which should spare medical teachers and writers the drudgery of consulting ten thousand or more different indexes or of turning over the leaves of as many volumes to find the dozen or so references of which they might be in search." In making a tabulation of seventy-four ascertainable cases of operations for epilepsy as the material for this dissertation, Billings found himself hard put to it for references and literature, which he obtained with the greatest difficulty, even by correspondence with the medical libraries of New York, Philadelphia and other American cities. He was driven to the conclusion that "while there was nowhere in the world a library which contained all medical literature, there was not in the United States any fairly good medical library" containing even a respectable fraction of this literature. In 1861, in fact, American research workers in medicine, if any, were driven to the several libraries in the European cities.

Billings found his opportunity on the last day of 1865 when, after arduous service as operative surgeon and medical inspector in Grant's campaign of 1864, he was assigned to the Surgeon General's office with nominal care (in addition to other duties) of the small collection of medical books which had existed in the War Department bureau since the days of Surgeon General Lovell (1818). How he gradually built up this collection (2,253 volumes in 1865) during the thirty years of his librarianship, first with the aid of a slush fund, then by annual appropriations from Congress, up to the 116,847 books and 191,598 pamphlets in the Library when he was retired from active service in the army (1895), is another story.

During the fifteen years preceding the appearance of the first volume of the Index Catalogue (1866-1880), Billings was experimenting on all known methods of cataloguing and indexing medical literature, from the ordinary type of author entry to the Dewey system (1876). Subject entries, fitful and eclectic as those in the catalogue of the British Museum, begin to appear in his catalogue of 1871 (13,330 volumes) and by 1876, he had evolved and published his Specimen Fasciculus of a medical library catalogue, indexing itself, as to both authors and subjects. Shortly after this event, Billings acquired an able and loyal assistant in the learned Dr. Robert Fletcher, who was assigned to duty in the Surgeon General's Library, Sept. 1, 1876. As plans for the publication of the Index Catalogue approached fruition, it became apparent to the two editors that while such a publication might give the bulk or cream of the world's medical literature on each indexed subject (say Brain or Cholera or Labor) up to the date of publication of the particular lettered volume (B, 1881; C, 1882; L, 1886), there was need for a current periodical index of the newer medical literature of each successive year. The

Index Medicus was therefore issued in monthly numbers in 1879, while, largely through the good offices of Dr. Abraham Jacobi, appropriations for printing the first volume of the Index Catalogue were obtained in the same year.

The two germinal ideas specified were not essentially new: the merit lay, in Captain Cuttle's phrase, "in the application." The oldest known medical publications on Babylonian baked bricks or Egyptian papyri, not to mention the Hippocratic Canon, are really the shreds and remains of virtual medical libraries, works by different hands, associated with the name of an individual teacher, school or period, often overlaid with superadded material. The physicians of the Coan and Cnidian schools, as well as Aristotle, Theophrastus and the Alexandrian teachers, undoubtedly had medical libraries. The probable or presumable libraries of physicians in the successive centuries of the Middle Ages may be readily inferred by statistical computation of the number of citations from old authors in the various medical MSS. or incunabula. In her classification of the 15,000 medical MSS. of the Middle Ages extant in Great Britain, Dorothea Singer has, in fact, given us the probable subject classification of a medieval medical library. Many of the earliest printed books are carefully indexed from A to Z, nay, some of these incunabula, such as the *Aggregator* or *Matthaeus Salvaticus*, are really alphabetical index catalogues of the drugs and simples of the time. The concordances of Hippocrates by Erotian, Foes and Littré, or of Galen by Brassavola and Kühn, are alphabetical subject indexes to whole vast periods of Greek medicine. As far as mere books and pamphlets were concerned, Conrad Gesner, Merklin, Haller, Ploucquet, Young, Forbes, Atkinson, Watts, Hain, Choulant and Haeser had all made valuable contributions to medical bibliography. Haller published exhaustive bibliographies of botany, anatomy, surgery and internal medicine (1771-1778), Haeser of epidemic diseases (1843), Meissner a model index catalogue of books on pediatrics (1850). During 1830-1845, the Danish surgeon, C. P. Callisen, had even made a kind of index catalogue of the periodical medical literature of 1750-1845, but by authors only.

The new feature of the Index Catalogue and the *Index Medicus* was the exhaustive indexing of the books, pamphlets and contents of periodicals alphabetically by subjects, as well as by authors. The main classification in the first and second series of the *Index Medicus* (1879-1899) was a somewhat hierarchical arrangement of subjects in order of relative importance, from Bibliography and Anthropology to Nursing and Veterinary Medicine, under which rubrics the books and periodical titles indexed were alphabetized by authors. This necessitated the preparation and publication of somewhat cumbersome and expensive author and subject indexes to each annual volume. The classification employed in the latter was that of the Index Catalogue. Up to 1900, the attractive feature

of the *Index Medicus* to university professors and research workers was its appearance in monthly numbers. To men like Welch or Osler or Jacobi or Mitchell these afforded, at stated intervals, a purview of their specialties or of the whole field of medicine, as pleasant and arresting as were the morning *Spectator* or *Tatler* to the eighteenth century Englishman. At the same time, the annual author and subject indexes insured the usefulness and value of the *Index Medicus* for the future. But it was obvious, from the start, that a journal of this type, financed by private enterprise, with a limited subscription list (never exceeding 500) was foredoomed to financial disaster. After contributing materially to the bankruptcy of two successive publishers, the *Index Medicus* was financed by its actual editor, Dr. Fletcher, at the phenomenal rate of \$25 per annum, up to 1899, when it suddenly collapsed from lack of financial support. During 1900-1902, an attempt to carry on, with very restricted material, was made in France, under the title "Bibliographia Medica," edited in three successive volumes by Drs. Marcel Baudouin, Charles Potain and Charles Richet (Paris). In 1903 the American *Index Medicus* was revived by the Carnegie Institution of Washington, which published the Second Series (vols. I-XVIII, 1903-1920) and the Third Series (vols. I-VI, 1921-1926). During the forty-six years of its existence (1879-1926), the *Index Medicus* comprises forty-five, or, including the French publication, forty-eight volumes.

In January, 1916, the American Medical Association published the first number of its *Quarterly Cumulative Index to Current Medical Literature*. This journal introduced several important improvements in medical indexing. Like the Surgeon General's Catalogue, the new *Quarterly* indexed itself as to both authors and subjects; furthermore, by cumulation of the first three quarterlies in succession, the last quarterly of each year became, in effect, the completely indexed volume. Both author and subject titles were given in English, the former of utmost brevity in the earlier volumes, the latter more expansive. The arrangement of the material on the page was the best possible for ready reference, and the exploitation of type had been carefully thought out with regard to perspicuity. The new *Quarterly* thus became immediately popular among research workers and reference librarians. Here, in fact, was a new departure and along lines for which the world had long waited; viz., an automatic system of self-indexing, which dispensed with the cumbersome index to an index, whether of authors or subjects or both. The gain in checks on accuracy through the full-time service of a

large personnel was also of moment. The only drawback to the new publication was the relatively small number of periodicals indexed, 157 in 1916, 326 in 1926. The A. M. A. *Quarterly* made the strongest appeal for current usage. The *Index Medicus* had, as covering all the material, the optimum survival value for the future. At the same time, it became obvious to all interested that there was an enormous duplication of labor, effort, administration, expense, paper, printers' ink and consumption of time in the preparation and publication of two large and costly periodicals covering much the same ground. The manifest destiny of the two journals was fusion, but even tentative consideration of this idea was out of the question after the event of April 6, 1917, when both the American Medical Association and the Carnegie Institution of Washington became immersed in wartime activities.

ADVANTAGES OF FUSION

The *Index Medicus*, in the wording of Army Regulations, "is not a governmental document" but a periodical supplement to the Index Catalogue, and was prepared for the press from the start as an extra-official activity. The entries were copied from the library cards by outside people; the redaction of copy and proofreading of the journal and its indexes were done by the editors as night work outside the Library. In the early days of the eighties and nineties, the monthly numbers seldom averaged more than 50 or 60 pages, the volume (say in 1894) covering about 600 pages or about 12,000 to 15,000 titles. By "sporting oak" and denying himself to visitors, it was possible for Dr. Fletcher to run off a monthly number for the printers in a single evening. With greatly restricted material, the French *Index Medicus* of 1900-1902 covered 974, 1,128 and 888 pages, respectively. In 1903, the revived *Index Medicus* covered 1,065 pages, exclusive of the author and subject indexes; in 1913, 1,448 pages; in 1914, 1,311 pages. The cost of the journal since 1903 has thus been always considerably in excess of the liberal annual grant made by the Carnegie Institution of Washington. This question of extra expense became of moment in 1913, but the situation was saved by the European war, which greatly cut down the output of worthwhile medical literature in the warring countries, while, during the lean years following the war, the exclusion of the

trashier sort of literature which then abounded was a genuine public service. At the same time, this extraordinary proliferation of periodical medical literature, amounting to more than twice the quota of 1894, vastly increased the probabilities of error in copy and proofs, while the reliable personnel employed was decreasing annually through death or other unavoidable contingencies. In 1921, owing to the impossibility of acquiring suitable personnel to carry on the annual Subject Index, the old subject arrangement of 1879-1920 was discarded, and the *Index Medicus* began to index itself quarterly as to subjects (in alphabetical order). The expensive and cumbersome Author Index was perforce retained. The American Medical Association, meanwhile, possessed the advantages of numerous and efficient personnel, rapid and effective press work, and administrative facilities for making the combined Index more widely useful and continually valuable.

THE COMBINED JOURNAL

In addition to indexing itself alphabetically as to authors and subjects, the salient features of the new index are that (1) it combines the best features of the classification of the *Index Medicus* and the *Quarterly Cumulative Index*; (2) the author titles are now given in full in the original languages, with the exception of titles in the Slavic, Scandinavian and Oriental languages, which are presented in English translation; (3) the subject entries are brief English abstracts of the actual content of the articles in question, without references to the titles, unless the latter happen to be accurately descriptive. It is the hope and belief of the editors that, in the long run, the latter device will awaken medical authors and editors to the advantage and necessity of providing all articles in medical periodicals with accurate descriptive titles, since papers of real import and value are submerged and actually lose themselves under titles which are ambiguous, obscure or misleading. In aid of this matter, the classification-rubrics are chosen with the greatest care, again, with reference to the actual content of the articles, and these arrangements are further helped out by a liberal system of cross references, which was not possible in the *Index Medicus*. The new books of the quarter are presented, for ready reference, both by authors and by subjects

and with prices attached, on page 2 of the new Index. There follow an alphabetical list of publishers of the books and periodicals indexed (American and foreign) and an alphabetical list of all the periodicals indexed, with full titles, names and (where possible) addresses of publishers. The number of current periodicals now coming into the Surgeon General's Library is about 1,925. They include all important periodicals of anthropology, biology, psychology and even those of chemistry, physics and general science which may publish articles bearing on medicine. Any unusual and worth-while books or articles of this character not apt to be featured through regular medical channels will be included if sent to the Chicago editor (American Medical Association).

MODULUS OF CLASSIFICATION

Beginning with 1879, the nomenclature and classification of diseases employed in the *Index Medicus* was that of the Royal College of Surgeons, derived, in turn, from the classification proposed by William Farr¹ in 1855. Naturally subject to many changes and additions incident to advances in modern medicine, this arrangement has stood the test of time. Its immense superiority over the older "botanical" arrangements, listed by Wunderlich in the appendixes to his *History of Medicine*, will become at once apparent to any one familiar with the classification of diseases (say) in the tenth edition of Osler's *Practice*, which really derives from Farr. In these days of interrelationship of all the applied sciences, in which even anthropology is in process of transformation through advances made in medicine, the proper classification of many complex titles of newer type becomes a matter of extreme difficulty or even delicacy. As only one entry of such titles could usually be made in the *Index Catalogue* or the *Index Medicus*, it became necessary in each case to find the center of gravity of the title, and this modulus of classification, like other moduli, was quantitative, i. e., had to turn on actual or apparent weight (some preponderant feature) in the scale of relative importance. Thus, articles on the oculocardiac reflex or the effort syndrome (D. A. H.) or "Latent Cerebral Tumor in a Case of Epilepsy Treated by Luminal," found their places auto-

1. Farr, William: *Compt. rend. Cong. internat. de statist.*, 1855, Paris, 1856, pp. 147-168.

matically under Reflex (*Oculocardiac*), Heart (*Neuroses*) or Epilepsy (*Pathology*).

In the *Index Medicus*, because of the high cost of printing, no cross references to the collateral subjects could be made. In the new *Quarterly Cumulative Index*, however, titles of this type, if sufficiently important, are actually duplicated or triplicated under the collateral rubrics, which makes fuller bibliographies under important headings. When not employed as title-rubrics in the new journal, the Index Catalogue rubrics of the Washington classification are protected by ample cross-references. For classifiers of medical literature, perhaps the most bothersome, boresome and baffling titles are those in which two or more seeming disparates, (such as cancer and tuberculosis) are linked together. The general formula of this abundant class ("something-or-other and something else") is as laughable in its stereotypy as the pattern which was put to such liberal usage in novels of the Damnation-of-Theron-Ware type. In the *Quarterly Cumulative Index*, which employs not one but several moduli of classification, the difficulty attaching to these double-barreled titles is obviated by printing them under both disparates or otherwise covering one disparate by a cross-reference. Thus, in the January-March number of the new journal, the article by Adamantiadis will be found under "Trachoma" and "Keratitis," that by Agnoli under "Diabetes, Insulin in," and "Diuresis," with reference to the former from "Insulin," that by Albrecht (O.) and Ranzi under "Achondroplasia" and "Spinal Cord Compression."

HOW TO USE THE NEW INDEX

For research workers, the classification of the *Index Medicus* of 1879-1926 is identical with that of the Index Catalogue. In other words, references to the total medical literature of the years 1879-1920 will be found in the annual subject index of the *Index Medicus* for these years, and in the self-classifying arrangement of the four quarterly numbers for the period 1921-1926. The same thing applies to the *Quarterly Cumulative Index* of the decade 1916-1926, for the limited number of periodicals covered during these years. Beginning 1927, the *Quarterly Cumulative Index Medicus* will cover all the medical and scientific periodicals on hand in the Surgeon General's Library, numbering 1,925.

Mercifully for the medical profession, not all these 1,925 periodicals are indexed or deserve to be indexed. An astounding percentage of recent medical literature is piffle. But any worthwhile scientific periodical of today, even of subjects like anthropology, geography, philology or mathematics, may contain an occasional medical article of value, and this kind of indexing will be extended shortly to the scientific and secular periodicals in the Smithsonian Library and the Library of Congress. Foreign book titles are catalogued for the new Index directly from the descriptive trade lists.

How to use all this material? Suppose your subject is the pituitary gland. Look for the literature in its alphabetical place, then follow up, as in the Index Catalogue, with such cross-references as are germane or essential; e. g., Acromegaly, Endocrine Glands, Hypothalamus, Infantilism, Obesity. If it is Hydrogen Ion Concentration, then follow up with Acid-Base Equilibrium, Acidosis, Alkalosis, Blood, Cerebrospinal Fluid, Urine and so on. To get the maximum usage out of the Quarterly Index, familiarize yourself with the essential features of its classification beforehand and follow up all the cross references. Foreign readers who cannot cope with the English titles under the subject rubrics will find the full title in the original language under the author entries. On account of the large amount of 1926 literature on hand during January-April, 1927, the quarterly will not attain its full stride into the 1927 literature until the first cumulative volume is published in July, 1927. This overlapping of material at the beginning of each year is unavoidable, by reason of the large amount of foreign literature which does not reach American libraries until comparatively late in the year. In looking, therefore, for references allocated to a certain year (say 1927), consult the volumes for the given year (1927) and the succeeding year (1928). Successful research depends on the worker as well as on the index. In the words of the late President Woodward of the Carnegie Institution: "The scientific specialist who does not know more of his subject than a bibliographer can teach him is not worth his salt."

ENVOY

The curse of recent medicine is the gigantic, senseless proliferation and prolixity of its periodical litera-

ture. It has been the despair of librarians, the enslaver of indexers, the nightmare of classifiers, the bugbear of editors, and, even in Dr. Fletcher's time, was the occasion of his celebrated witticism: "The whole world is in a conspiracy against medical bibliographers." It is a consequence of the self-determination mania which "infects the world" and the end is not yet, for there are as many "new" sciences as there are up-and-coming nations. Some day there may be minor Nobel prizes or *prix Monthyon* for those who decline to write unless they have something really new to say and who can state their intention in titles of telegraphic brevity.

In 1926, as stated, it was decided by the authorities of the three organizations concerned that the *Index Medicus* and the *Quarterly Cumulative Index* were

This day to be conjoined
In the estate of honorable marriage.

The natural consequence of lawful matrimony made its appearance within the statutory time, and it is no exaggeration to say that the young hopeful, in the words of our leading humorist, was ushered into the world "to the tune of sweet, soft music. There was no harsh bawling from below. There was dulcet twittering from above." Mayhap there was even "rejoicing in heaven," for, with the retirement of the parents, there was to be one medical journal the less in the world. The *Quarterly Cumulative Index Medicus* represents, as stated, the culmination of an effort, long since contemplated, to save the duplication of expense, labor and time consumed in the production of two large and costly periodicals covering much the same material. As combining the best resources available and as employing the most advanced and labor-saving methods of medical indexing, the new Index deserves, therefore, the hearty and unqualified support of the entire medical profession all over the world. May we auspicate its future in the ancient invocation, *quod felix, bonum faustumque sit*.

Army Medical Library.

